NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

F A C T S H E E T

(pursuant to NAC 445A.236)

Applicant: 7-Eleven, Incorporated
2711 Haskell Avenue
P.O. Box 711
Dallas, Texas 75221

Permit: NV0023264

Location: 7-Eleven Store 29644
2716 East Lake Mead Boulevard
North Las Vegas, Clark County, Nevada 89030
Latitude: 36° 11' 45" N
Longitude: 115° 06' 38" W
Township 20 S, Range 61 E, Section 24 MDB&M

General: The Applicant has applied for a National Pollutant Discharge Elimination System (NPDES) permit, NV0023264, to discharge treated groundwater to the Las Vegas Wash via the City of North Las Vegas Storm Drain System.

The 7-Eleven Store 29644 is a self-service fueling station and convenience store where groundwater is contaminated with petroleum hydrocarbons due to a 1995 gasoline leak from an underground storage tank or ancillary piping. Groundwater remediation will be accomplished by using high vacuum dual-phase, pump-and-treat system. The extracted groundwater will be processed through an air stripper unit. Treated groundwater will be discharged to a storm drain adjacent to the site, and off-gases from the extraction blower and stripper unit will be treated and discharged to the atmosphere under a separate permit. The site includes eleven groundwater monitoring wells, two vapor monitoring wells, one vapor extraction well, ten air sparging wells, one vapor monitor point, and one combined air sparging/vapor extraction well.

The treatment system is designed for a maximum daily flow rate of 15 gallons per minute (0.022 million gallons per day). Pumping, treatment, and monitoring will continue until the Nevada Division of Environmental Protection (NDEP) - Bureau of Corrective Actions has determined that groundwater and soil have been adequately remediated.

Description of Discharge: The groundwater contaminated with petroleum hydrocarbons will be pumped to an air/liquid separator. Water will be pumped from the separator to the air stripper for treatment. The treated effluent will be discharged to the Las Vegas Wash via the City of North Las Vegas Storm Drain System. The groundwater treatment system is designed to treat the contaminated groundwater to concentrations at or below State action levels before discharging to the storm drain system and ultimately waters of the State.

A December 2002 volatile organics analysis, EPA Method SW8260B, of the monitoring well 5 (MW 5) groundwater detected the following compounds at the listed concentrations: benzene 120 µg/L; toluene 150 µg/L; ethylbenzene 700 µg/L; m,p-xylene 2,000 µg/L; o-xylene 20 µg/L; isopropylbenzene 63 µg/L; n-propylbenzene 160 µg/L; 1,3,5-trimethylbenzene 41 µg/L; 1,2,4-trimethylbenzene 910 µg/L; and naphthalene 460 µg/L. Also in December 2002, the MW 5 groundwater had a pH of 9.57 SU and elevated concentrations of total dissolved solids 2,700 mg/L; magnesium 220 mg/L; sulfate 690 mg/L; and iron 10 mg/L. The groundwater met drinking water standards for all other analyzed constituents. Groundwater flow is to the east toward the Upper Las Vegas Wash.

Flow: 15 gallons per minute – Daily Maximum
0.022 million gallons per day

Receiving Water Characteristics: Groundwater from the treatment system is discharged to the City of North Las Vegas Storm Drain System on the Applicant's property. The storm drain conveys the water to the Upper Las Vegas Wash. Water quality standards for the Upper Las Vegas Wash are specified in NAC 445A.199.

The beneficial uses of the Upper Las Vegas Wash, as designated in NAC 445A.198, are propagation of aquatic life, excluding fish; propagation of wildlife; irrigation; recreation not involving contact with water; maintenance of a freshwater marsh; and watering of livestock.

Proposed Effluent Limitations: Representative discharge samples shall be collected from the discharge line after the treatment system and prior to discharge to the storm drain, Outfall 001. Discharge parameters at Outfall 001 shall be monitored in accordance with the following:

Table 1: Discharge Limitations

PARAMETERS	EFFLUENT DISCHARGE LIMITS	MONITORING REQUIREMENTS	
	Daily Maximum	**Measurement Frequency**	**Measurement Type**
Flow, gpm	15	Continuous	Flow Meter
VOC EPA Method 624 (report all parameters), µg/L	Monitor & Report	Annually[4]	Discrete
Benzene, µg/L	5	Weekly/Monthly[2]	Discrete
Ethylbenzene, µg/L	100	Weekly/Monthly[2]	Discrete
Toluene, µg/L	100	Weekly/Monthly[2]	Discrete
Xylenes, Total, µg/L	200	Weekly/Monthly[2]	Discrete
TPH EPA SW-846 Method 8015 (modified to detect "purgeable fuel hydrocarbons"), mg/L	1.0	Weekly/Monthly[2]	Discrete
MTBE, µg/L	20	Weekly/Monthly[2]	Discrete
Total Dissolved Solids, mg/L	Monitor & Report	Monthly/Quarterly[3]	Discrete
Total Inorganic Nitrogen as N, mg/L	20[5]	Monthly/Quarterly[3]	Discrete
Total Phosphorus as P, mg/L	Monitor & Report	Monthly/Quarterly[3]	Discrete
pH, SU	$6.5 \leq$ pH ≤ 9.0	Monthly/Quarterly[3]	Discrete
Iron, mg/L	1.0	Monthly/Quarterly[3]	Discrete

NOTES:

1. Monitor and record daily discharge flow in gallons per day and report on a weekly basis for the first two months of operation, followed thereafter by monthly monitoring and recording.
2. The Permittee shall sample the discharge weekly for the first two months of operation, followed thereafter by monthly sampling. If the treated effluent exceeds any permit limit, the Permittee shall make appropriate treatment system adjustments and resample the discharge within 72 hours after lab notification of exceedance. The first sample shall be taken within three days of commencing system operation.
3. The Permittee shall sample the discharge monthly for the first three months of operation, followed thereafter by quarterly sampling.
4. To be sampled in the fourth quarter and submitted to the Division with the Annual Report.
5. 95% of the samples must be ≤ 20 mg/L TIN.

gpm: Gallons per minute. SU: Standard units.

µg/L:	Micrograms per liter.	SW 846:	Solid Waste 846 Analytical Methods.
mg/L:	Milligrams per liter.	N:	Nitrogen.
VOC:	Volatile organic compounds.	P:	Phosphorus.
MTBE:	Methyl tertiary butyl ether.	EPA:	U.S. Environmental Protection Agency.
TPH:	Total petroleum hydrocarbons.	TIN:	Total inorganic nitrogen.

Rationale for Permit Requirements: Monitoring requirements for the parameters specified in Table 1 above have been established in the draft permit to ensure that the receiving water, the Las Vegas Wash, is not degraded as a result of the Permittee's remediation discharges.

Flow: The flow is limited by the design capacity of the treatment system.

Volatile Organic Compounds (VOC): Annual analysis of the EPA Method 624 VOCs is required to verify removal prior to discharge of any VOC that may have been drawn to the site by the Applicant's recovery of hydrocarbon contaminated groundwater. More frequent analysis is required for the VOCs documented as present in the groundwater.

Total Petroleum Hydrocarbons (TPH): The shallow groundwater in the vicinity of the facility has been contaminated by a hydrocarbon release. Monitoring is required to verify proper treatment prior to discharge.

Methyl tert-butyl ether (MTBE): The Division has adopted 20 µg/L as the action level in groundwater for sites in close proximity to receptors and/or sensitive environments. This groundwater standard is used for all discharges to surface waters.

Total Dissolved Solids (TDS): NAC 445A.199 includes a single value at 180ºC TDS standard for beneficial uses of ≤ 3,000 mg/L. The TDS concentration of the groundwater at the time of permit application was 2,700 mg/L. The shallow groundwater with naturally occurring elevated TDS levels would flow to the Wash, if it was not intercepted by the pump and treat system, therefore, the TDS standard is not applied to dewatering and shallow groundwater remediation discharges in this area.

This permit is for the interception, treatment, and passage of groundwater and thus is exempted under the Colorado River Basin Salinity Control Forum's policy on groundwater interception.

Total Inorganic Nitrogen as Nitrogen (TIN): NAC 445A.199 includes a requirement to maintain existing higher quality TIN standard of 95% of the samples ≤ 20.0 mg/L.

pH: NAC 445A.199 includes a single value pH water quality standard for beneficial uses within the range of 6.5 – 9.0 SU.

Total Phosphorus as Phosphorus (TP): In 1987, a TP total maximum daily load (TMDL) of 434 lb/day was established for the Las Vegas Bay/Wash. The waste load allocations (WLAs) set are applicable for only April through September and were based on a target concentration of 0.64 mg/L. WLAs have been assigned only to the Cities of Las Vegas and Henderson and the Clark County Sanitation District.

Based on the State's de minimis policy of exempting discharges of less than 1 lb/day TP from the TMDL analysis, a WLA has not been assigned to this Permittee. At the maximum permitted flow of 0.022 MGD, the TP concentration in the discharge must exceed 5.45 mg/L to violate the 1 lb/day de minimus loading threshold. Therefore, a TP concentration has not been included in the permit.

Iron: Per NAC445A.144, the aquatic life standard for iron is 1.0 mg/L. Based on a single sampling, the Applicant reported an iron groundwater concentration of 10 mg/L.

Total Suspended Solids (TSS): NAC 445A.199 includes a TSS water quality standard for beneficial uses of ≤ 135 mg/L. Due to the low TSS in groundwater, TSS monitoring of the discharge is not required by the draft permit.

Total Ammonia as Nitrogen: A total ammonia TMDL of 970 lb/day has been established for the Las Vegas Bay/Wash. Based on the low concentrations of total ammonia in groundwater and the State's de minimis policy of exempting discharges of less than 1.0 lb/day total ammonia from the TMDL analysis, the total ammonia load is not expected to be an issue and has not been included in the draft permit.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the schedule of compliance.

-Within ninety (90) days of the permit effective date, the Permittee shall submit an Operations and Maintenance Manual to the Division for review and approval.

-Within sixty (60) days of the permit effective date, the Permittee shall submit as-built drawings of the treatment and discharge system to the Division for review and approval.

Proposed Determination: The Division has made the tentative determination to issue the proposed permit for a period of five (5) years.

Procedures for Public Comment: The Notice of the Division's intent to issue a permit authorizing the discharge of treated water to the Las Vegas Wash, subject to the conditions contained within the permit is being sent to the **Las Vegas Review-Journal** for publication. The Notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail, time-stamped faxes, e-mails, or hand-delivered items) to the Division is 5:00 PM July 18, 2003.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Bruce Holmgren
June 2003
I:\WPFILES\BWPC\PERMITS\7-11\29644\2003\23264f.fct.doc